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ABSTRACT

The relationship between high school restructuring and vocational reform was examined in case studies of two moderately large comprehensive California high schools that have undertaken schoolwide efforts to establish new forms of social organization for teachers' and students' work. Over the 2-year study period, several visits were made to each site. During those visits, data were collected from the following sources: interviews with teachers, administrators, counselors, students, and community members; observations of classrooms, meetings, teacher planning sessions, and inservice education activities; and reviews of key school documents. Despite several important differences, the reform processes at the two schools shared certain common conditions, including the following: the restructuring environment was very conducive to new forms of vocational education without fundamentally altering the division between academic and vocational goals for most students or teachers; career academies emphasized the dual mission of career preparation and college preparation; curriculum integration received widespread support; efforts to establish new curricular connections concentrated on discovering "authentic" connections across subjects; new opportunities were created for collegial contact and collaborative work among teachers; and academic teachers came to admire the vocational teachers' expertise and achievements. It was concluded that substantial change in the nature/scope of vocational preparation requires schoolwide effort. (Contains 25 references.) (MN)

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National Center for Research in
Vocational Education

University of California, Berkeley

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HIGH SCHOOL RESTRUCTURING AND VOCATIONAL REFORM: THE QUESTION OF "FIT" IN TWO SCHOOLS

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EXECUTIVE SUMMARY

Proposals to reshape the relationship between academic and vocational preparation coincide with other challenges to the prevailing curriculum, pedagogy, and social organization of secondary schools. Despite certain broad areas of agreement among these various reforms, however, they tend to differ in the emphasis they give to work preparation among the remedies for the present failings of high schools. In this report, we draw upon the experiences of teachers and students in two "restructuring" high schools to examine the place of vocational reform amid the evolving purposes and content of secondary schooling.

At the outset, we reasoned that the prospects for closer ties between academic and vocational education rested on the impetus provided by specific reform initiatives to take work preparation seriously as part of education for all students, and on a school's capacity to undertake the necessary structural and cultural changes. We were guided by three questions:

1. In challenging the established traditions of secondary schooling, do these schools also examine and alter the long-standing ambivalence toward vocational preparation? That is, does the "restructuring" environment create a favorable disposition toward vocational reform?

2. In seeking a more coherent and well-connected curriculum—a common tenet of broadly defined school restructuring—do schools more readily embrace the idea of integrated academic and vocational curricula?

3. In creating alternative structures for students' and teachers' work—interdisciplinary teams in lieu of departments, for example—do schools enable teachers to bridge the "two worlds" of academic and vocational teaching?

In selecting case study sites, we focused upon schools that have been funded to pursue a comprehensive agenda of school reform. Southgate High School and Prairie High School (pseudonyms), both moderately large comprehensive high schools in California (approximately 2,400 students), have undertaken a program of reform in which the characteristic assumptions, traditional structures, and persistent practices of secondary schooling have—in principle at least—all been opened to question. The schools differ in

the reform strategies they have adopted, but have in common a schoolwide effort to establish new forms of social organization for teachers' and students' work.

Over a two-year period, we made several team visits to each site. We conducted interviews with teachers, administrators, counselors, students, and community members; observations in classrooms, meetings, teacher planning sessions, and inservice education activities; informal observations throughout the school grounds, including the staff lounges and offices; and reviews of key school documents, including various demographic data, reports, yearbooks, teachers' work assignments, course offerings, and students' academic transcripts.

Although the schools differed in some important ways, we found certain common conditions in regard to our three guiding questions:

1. *Was the restructuring environment conducive to vocational reform and the integration of academic and vocational study?*

    - The restructuring environment was very conducive to new forms of vocational education, but did not fundamentally alter the division between academic and vocational goals for most students or teachers. The integration of academic and vocational education gained substantial visibility at both Southgate and Prairie with the introduction of a designated career academy which was granted an unprecedented degree of institutional legitimacy and material support. Preparation for work—as a goal for all students—figured prominently in the reform-oriented documents of one of the schools but was not evident at the classroom level except in the designated career academies. The academies' demonstrated success with students brought them high regard but proved insufficient to create a substantially altered view of work education among the wider population of teachers and students.

    - Fundamental to elevating the status of the career academies at Southgate and Prairie was their emphasis on a dual mission: career preparation *and* college preparation. In recruiting students to an academy, teachers emphasized this dual mission—students came to the academy persuaded that they would be helped to prepare for college, while also acquiring

marketable skills. The college preparation side of this dual mission took precedence in both schools. On the whole, we did not find academic teachers or departments outside the academies reconsidering how curriculum, instruction, and assessment might give greater prominence to work-related outcomes.

- In each school, school-level leadership tended to support career academies as one of several parallel ventures in reform, but stopped short of promoting larger scale discussions regarding the relationship of academic and vocational goals.

2. *Did the emphasis on integrated or interdisciplinary curriculum extend to the integration of academic and vocational study?*

- Curriculum integration received widespread support at both schools, both in terms of administrative endorsement and teacher interest. The schools organized common planning times for interdisciplinary teams (including the academy teams composed of academic and vocational teachers). Administrators committed resources to professional development activities that enabled teachers to consult with colleagues or other experts on approaches to integrated curriculum, and to work with similar teams from other schools. Taken together, the *value* attached to integrated curriculum and the *resources* devoted to it created a substantial latitude for experimentation.

- Teachers' efforts to establish new curricular connections concentrated on discovering "authentic" connections across *subjects*, but tended to stop short of integration with *work* or other forms of "practical" knowledge. Even teachers who supported cross-subject integration balked at the idea that a premium be placed on concepts or skills with a work-related or other out-of-school application. Outside the career academies, we saw virtually no instance in which interdisciplinary teams concerned themselves with these possibilities. Their reluctance appeared to stem in part from well-established conceptions of what legitimately constitutes instruction in academic subjects and in part from an absence of persuasive alternatives.

3. *Has restructuring created closer ties between academic and vocational teachers?*

- Both schools have created new opportunities for collegial contact and collaborative work among teachers—for example, schoolwide governance arrangements, team-based teaching assignments, and the organization of teacher planning time. In both schools, career academies have brought a small number of academic teachers into intensive and productive contact with vocational colleagues. However, the academies also suffer high rates of turnover among the academic teachers, leaving us with questions regarding the overall strength and durability of these collegial ties. In one of the schools, academic and vocational teachers also come together in committees and other settings to pursue questions of schoolwide interest, but we neither saw nor heard described any instance of a prolonged discussion of vocational and academic goals.

- In both schools, academic teachers came to admire the expertise and achievements of the vocational teachers. That is, the overall climate of restructuring and the specific success of the career academies combined to make vocational teachers less marginal than we have seen them in many other comprehensive high schools. Yet in many ways, these teachers remain divided in their educational goals, their conceptions of curriculum and instruction, and their views of students. The "two worlds" of academic and vocational teaching, if more readily bridged in these schools, remain visibly distinct.

The multiple currents of reform in these restructuring schools run along separate channels. Although they are given a comprehensive and coherent face in public documents, each has its own internal advocates and its own external sources of pressure and support. These separate channels parallel one another in important ways. That is, the directions pursued by vocational reform activities—seeking curricular connections, broadening students' understanding of occupational possibilities, building students' capacity for independent work and cooperative endeavors, and emphasizing assessment based in performance—are compatible with the spirit of school restructuring more generally. In this regard, the restructuring environment is assuredly conducive to new forms of vocational education.

The distinction nonetheless remains between a "work-bound" and "college-bound" curriculum. We find little indication of support for wholesale rethinking of the high school experience in ways that would broaden the conception of work education for all students. Although the principals of both schools consistently signaled their support for the career academies and for career education more broadly, they supplied equally consistent reinforcement for efforts to strengthen the traditional academic curriculum. Many academic teachers remained skeptical of a curriculum that would emphasize practical applications, especially if they believed that the search for practicality would take precedence over academic priorities—the key concepts or topics typically associated with core academic subjects.

With the exception of individuals who became directly involved in career academies or similar structures, few academic teachers had occasion to think explicitly and imaginatively about what "learning work," as Simon, Dippo, and Schenke (1991) phrase it, might amount to in a restructured school, or how vocational education might contribute to other reform goals. Structures that joined teachers' work in unfamiliar ways, such as the career academies, enabled teachers in these schools to discover shared interests, penetrate old stereotypes, and forge new social ties. They also revealed the limitations of structural solutions to problems that center on multiple and competing views of schooling.

The most ambitious integration models in these schools, such as career academies, have generally succeeded in garnering the respect of academic teachers, parents, and students—although not necessarily because they have fostered a deeper and broader understanding of what "learning work" might entail. Such models appear to achieve their effect with their students largely on the basis of (1) general "planfulness" about the future (including both postsecondary education and career); (2) small scale and close socio-emotional support for students of the sort also attempted by other "small school" or "school-within-a-school" models; and (3) the press for achievement communicated by teachers who monitor student progress closely. On this basis alone, these seem ventures worth supporting. It is perhaps through these accomplishments that these and similar programs most clearly stand to influence the wider school program and the experience of a larger number of students; that is, it would not require a major philosophic shift, and would require only a quite manageable structural reconfiguration, for most schools to supply the conditions available to students in these academies.

The paper concludes that substantial change in the character and scope of vocational preparation seems unlikely unless the schools succeed in placing "work" more visibly on the agenda of schoolwide goal-setting and redesign. Schools engaged in comprehensive programs of restructuring seem in principle well-positioned to do so. Our subsequent research in a larger number of schools suggests that these case study sites resemble other restructuring schools in many relevant respects. Most have created governance and decision-making structures that include multiple stakeholders: administrators, teachers, parents, community members, and students. Many have created common planning times for teachers to work both within and across traditional subject boundaries. Some, like these case study schools, have sought new ways of organizing teachers and students that will foster greater coherence across the curriculum and enable teachers and students to know and support one another better. Professional development activities tend to focus on ways of "rethinking" approaches to curriculum, instruction, and assessment. New forms of assessment offer opportunities to explore the intersection of academic concepts and practical application (e.g., senior projects typically incorporate a written narrative, a "product," and an oral presentation). Schools might take greater advantage of such arrangements to investigate what is and what might be meant by "learning work."

HIGH SCHOOL RESTRUCTURING AND VOCATIONAL REFORM: THE QUESTION OF "FIT" IN TWO SCHOOLS

Introduction

Proposals to reshape the relationship between academic and vocational preparation coincide with other challenges to the prevailing curriculum, pedagogy, and social organization of secondary schools. Repeated criticisms of the American high school have prompted numerous publicly- and privately-funded initiatives to supply greater rigor and utility to the curriculum, to seek more meaningful connections among academic subjects, and to engage adolescents more productively with adults and with one another.

Despite certain broad areas of agreement among these various reforms, however, they tend to differ in their views of the primary *purposes* of secondary schooling and the way in which those purposes should be expressed in the curriculum. Specifically, advocates of reform place different emphasis on work preparation among the remedies for the present failings of high schools. Indeed, some of the highly visible secondary-school reform initiatives seem largely unconnected with parallel reforms in the transition from school to work, even retaining a pronounced ambivalence toward explicit vocationalism (e.g., Sizer, 1992). Some other initiatives, such as those centered on a more interdisciplinary curriculum and on closer ties between in-school and out-of-school learning, seem particularly compatible with the direction taken by vocational reform. Still others, such as the proliferation of subject-specific standards and assessments at the state and national levels, remain relatively silent on the matter of vocational education, but tend to reinforce existing divisions in the high school.

In this report, we argue that the prospects for integrating academic and vocational purposes are linked to two conditions: first, the *impetus* provided by specific reform initiatives to look toward or away from work preparation as a fundamental aspect of secondary schooling for all students; and second, the *capacity* of the schools to engage in a thoroughgoing "reinvention" or "redesign" that challenges many of the taken-for-granted assumptions of what the high school experience should constitute. Consistent with prior studies of large-scale change, we anticipate that the impetus to change existing arrangements—or to preserve them—will be found partly in the histories and contexts that shape the internal life of particular high schools, and partly in externalities: the views

of schooling expressed by influential political figures, policymakers, or organizations; the imperatives or inducements contained in legislation or formal policy; the availability and appeal of alternatives; and the opportunities created by special initiatives or by more stable revenue streams. Further, we acknowledge that these various sources of constraint and support rarely seem to point clearly and consistently in the same direction. A school's capacity for "redesign" thus rests not only on individual knowledge and skill, but also on the ability to reconcile competing views and pressures, mobilize sources of human and material support, and sustain a certain collective will.

Favorable conditions for the wholesale redesign of schooling are demonstrably difficult to achieve. Certainly the record of successful school reform is uneven at best; the fundamental "grammar of schooling," as Tyack and Tobin (1994) term it, proves remarkably durable (see also Cuban, 1985; Sarason, 1971, 1990). The separation of academic from vocational pursuits is one long-standing feature of that grammar (Goodson, 1994; Little, 1995b; Oakes, 1986). If enduring change in schools is difficult to achieve under the best of circumstances, then change in the form, content, and status of vocational education seems highly unlikely, unless explicitly embraced as an element of a reform agenda.

We have therefore sought opportunities to investigate the integration of academic and vocational education in the context of more sweeping changes in comprehensive high schools. In doing so, we extend two previous lines of work: research on the ordinary, comprehensive high school, which documents the myriad ways in which the separation of academic and vocational education is sustained (Little, 1993; Little & Threatt, 1994); and research on innovative programs of vocational education, which concentrates on the features of selected programs such as career academies or Tech Prep programs (Andrew, 1995; Katz, Jackson, Reeves, & Benson, 1995; Raby, 1995; Ramsey, Eden, Stasz, & Bodilly, 1995; Stern, Raby, & Dayton, 1992).

In this report, we draw upon the experiences of teachers and students in two "restructuring" high schools to examine the internal impetus and capacity for redesign of the high school. Specifically, we pursue three central questions regarding the place of vocational reform amid the evolving purposes and content of schooling, and the social and professional organization of the school:

1. In questioning the established traditions of secondary schooling, do these schools also examine and alter the long-standing ambivalence toward vocational preparation? That is, does the "restructuring" environment create a favorable disposition toward vocational reform?

2. In seeking a more coherent and well-connected curriculum, do schools more readily embrace the idea of integrated academic and vocational curricula?

3. In creating alternative structures for students' and teachers' work—interdisciplinary houses and career academies in lieu of departments, for example—do schools enable teachers to bridge the "two worlds" of academic and vocational teaching?

In selecting two case study sites, we focused upon schools that had been funded to pursue a comprehensive agenda of school reform, including the integration of academic and vocational education. As in our prior work, we have concentrated on comprehensive high schools, on the basis that these are the schools that account for the vast majority of secondary students and teachers. We therefore excluded from consideration specialized career-oriented high schools or separate vocational centers linked to conventional high schools. In addition, we gave priority to urban schools with a heterogeneous student population.

To examine the relationship of vocational integration to other fundamental reforms, we undertook a two-phase study in each site. In the first phase, we sought interviews with administrators and teacher leaders who were well-positioned to articulate the school's official posture toward reform, and with academic and vocational teachers who presented a wide range of subject backgrounds and teaching assignments. In a second phase, we focused on selected cases within each school that embodied the school's reform strategy: a comparison of a grade-level interdisciplinary team and a career academy at Southgate; and a comparison of a career academy with both traditional and house-based arrangements at Prairie.

To the extent possible in each site, we attempted a "focused ethnography" that immersed project staff as frequently and widely in the school as possible. Data collection methods included open-ended and semi-structured interviews with teachers, administrators, counselors, students, and community members; observations in

classrooms, meetings, teacher planning sessions, and inservice education activities; informal observation throughout the school grounds, including the staff lounges and offices; informal time with teachers outside the school day; and review of key school documents, including various demographic data, reports, yearbooks, teachers' work assignments, course offerings, and students' academic transcripts.

We were not able to realize the intended design equally in both sites. At Southgate, we completed the first phase, and had completed a first round of teacher interviews and classroom observations for the second phase, when an unexpectedly high level of staff turnover led us to abandon the effort shortly before the beginning of the 1993-1994 school year. Staff losses included the district director of secondary instruction, the site principal, three of the five career academy teachers, and two of the four teachers of our target academic teacher team. A relatively large turnover throughout the school generally complicated the problem. It is certainly the case that early-stage turmoil and staff turnover are common dilemmas associated with whole-school change. Had this study placed the process and consequences of "restructuring" in the foreground, we would likely have sought a way to adjust our design and remain in the site. Our central concern was for the emerging place of vocational education within a more broadly restructured environment, however, and we judged the level of instability at the site to be too great, and our own resources too limited, to justify continuing. Thus, Southgate has less presence in this report than Prairie. Specifically, we lack systematic and comparative data on students in academy and team-based arrangements at Southgate, and we have fewer interviews and observations by which to compare the experience of teachers in the academy and team environments. Nonetheless, the picture that emerges from Southgate corresponds in some consistent and potentially important ways as with that at Prairie.

Work Preparation in the Local Reform Context: Two Schools

Southgate High School and Prairie High School (pseudonyms), both moderately large comprehensive high schools in California (approximately 2,400 students), have undertaken a program of reform in which the characteristic assumptions, traditional structures, and persistent practices of secondary schooling have—in principle at least—all been opened to question. The schools differ in the reform strategies they have adopted,

but have in common a schoolwide effort to establish new forms of social organization for teachers' and students' work.

Our field research design focused on alternative forms of social organization within the school—or as we began to call them, "niches"—and their implications for the integration of academic and vocational education. At Southgate, all students in grades 9-11 were assigned to one of five "houses," where they took all of their basic academic requirements; teachers in the houses were organized in grade-level interdisciplinary teams. An option in one of the houses was a career academy devoted to the graphic arts. The academy enrolled students beginning in the 10th grade, and was staffed by a team of teachers who taught full-time in the academy program.

At Prairie, traditional departments were merged in broader interdisciplinary "divisions," and teachers were encouraged to develop a variety of interdisciplinary arrangements for teaching and learning. We concentrated on three possibilities created by the Prairie structure. A career academy joined business technology teachers with teachers of English, social studies, and math to teach a cohort of 10th- and 11th-grade students. A small "house" program also enrolled a cohort of students, who were taught by teamed teachers in English and social studies. Finally, the traditional grade-and-subject arrangement of classes continued to account for the largest proportion of students.

In both sites, state-funded career academies constitute one visible manifestation of change; only the smallest vestige of traditional vocational programs remain evident.[1] The career academies in these schools have many of the features of academies elsewhere (see Stern et al., 1992). They form a "school within a school" in which students take some or all of their academic requirements together, in addition to pursuing a structured sequence of career-focused courses in a broadly defined occupational field; they purport to prepare students for postsecondary work *and* education; they join academic and vocational teachers in instructional teams, placing an emphasis on curriculum integration; and they seek opportunities for students to gain structured work experience through mentorships or

[1] At Southgate, the faculty includes one business teacher and one photography teacher whose classes are more properly seen as personal interest electives than as vocational preparation. At Prairie, the faculty includes one teacher with a combined assignment in drafting and auto, and a social studies teacher who teaches an elective in child development; all other vocational teachers are attached to the business academy or to a sequenced program in urban agriculture. For a description of vocational staffing and course offerings in five traditional California high schools from 1987-1990, see Little and Threatt, 1994.

internships. At the time of our study, career academies enrolled a relatively small percentage of each school's students (fewer than 10%).

Employing these structures or "niches" as a means of sampling teachers and students, we examined the degree of fit among various currents of reform in high schools. As described in official documents, three of those currents coincide in these schools:

1. *Creating a rigorous curriculum in the core academic subjects for all students.*
   This reform emphasis is evident in the state's Curriculum Frameworks and in its high school graduation requirements. At Southgate, the emphasis on "all students" was reflected in the press to eliminate "remedial" math and to employ a wider array of assessments. At Prairie, one finds widespread support for heterogeneous classes and efforts to develop agreed-upon standards for achievement in subject areas.

2. *Developing greater coherence and "connectedness" across the curriculum through interdisciplinary curricula, projects, and assessments.*
   The Curriculum Frameworks urge interdisciplinary connections where appropriate, as do the state's 1992 California High School Task Force report *Second to None* and the state-funded School Restructuring Demonstration Program (SB 1274). This stream of reform is evident in the organization of Southgate's affiliation with the Coalition of Essential Schools and in the shift from departments to interdisciplinary teams. It is manifest in Prairie's two main interdisciplinary curriculum divisions, in its effort to staff and schedule "partnership" arrangements among English and social studies teachers, and in its full-day interdisciplinary planning sessions.

3. *Strengthening the transition from school to work.*
   Both schools reflect recent developments in state and federal vocational reforms. In both schools, traditional vocational offerings have been replaced by career academies that combine academic and vocational pursuits. As described in school documents, the academies seek a stronger academic preparation, closer integration of academic and vocational content and instructional methods, and more meaningful ties between school-based learning and structured work experience.

School documents and school officials express allegiance to all three of these reform aims. As we began our inquiry, however, we did not assume that all staff shared a commitment to these reform aims, either singly or in combination. In particular, we did not assume that teachers embraced these multiple reforms as a coherent and mutually compatible set. Nor did we assume that newly configured vocational offerings (most evident in the career academies) signaled widespread understanding and acceptance of a "new vocationalism" (Grubb, 1995) in the school.

Southgate High School

Southgate High School's one-time reputation as an academically prestigious school serving an affluent white community faded over a period of 25 years prior to restructuring. By the mid-1980s, the school's population had become ethnically and economically diverse, while its teacher population had remained relatively stable (and mostly white). Students were achieving poorly on local proficiency tests, state assessments, and the SAT; daily attendance was a problem; and a substantial number of students failed to complete high school.

In the late 1980s, the school began a restructuring campaign aimed at bolstering the school's record and demonstrating its responsiveness to a changing student population. The school affiliated itself with the Coalition of Essential Schools in 1988, and in 1992 competed successfully for one of the state's "demonstration school" restructuring grants. Its plan for restructuring encompassed several features envisioned in the state's reform blueprint, *Second to None* (California High School Task Force, 1992): an integrated core curriculum in the 9th and 10th grades, multiple modes of student assessment, small-scale interdisciplinary groupings ("houses") to increase "personalization" for students, and the development of program majors in the 11th and 12th grades.

By 1992, interdisciplinary houses had replaced the conventional department organization for grades 9-11, each enrolling about 400-450 students and serving as home to about 12 teachers. Common characteristics of the house program, as detailed in school documents, combined principles of the Coalition of Essential Schools (e.g., "student as worker" and "personalization") with various structural arrangements (e.g., a counselor assigned to each house; interdisciplinary teacher teams at each grade level).

School leaders—the principal and a small group of activist teachers—viewed these structural changes as support for the three principal goals specified in the school's written restructuring plan: To prepare students with an "academic foundation," to produce "quality citizens in a changing society," and to equip graduates for a "productive work life in the 21st century." In support for its emphasis on work preparation, Southgate's reformers cited national statistics on rates of college attendance and the general inattention given by high schools to the transition from school to work. Although school reports do not provide data on college acceptances or postsecondary employment, low mean levels of academic achievement suggest that many of Southgate's graduates enter the workforce directly from high school. The school maintained,

> Our vision is that all our students will demonstrate that they are prepared for a productive work life when they (a) can integrate academic and applied knowledge and use this knowledge in practical ways; (b) have habits of initiative and responsibility; and (c) have a personal plan for the future. (*Southgate High School House Plan, 1988-1993*, p. 5)

In retrospect, the prominence of work preparation in the school's restructuring plans most certainly reflected the influence of the district's Director of Secondary Education, who was an energetic advocate of career academies. Although the school's vision was broadly stated in its House Plan, specific goals to prepare students for a productive work life centered on the development of a "broad based partnership academy program." In 1991, Southgate joined with members of the local printing industry association and with a nearby community college to introduce a career academy that was focused on graphic arts. The academy began with three teachers and a 10th-grade cohort of approximately 50 students, adding teachers and students in each of the successive two years to fill out the planned three-year program. Industry partners supplied equipment, materials, and expert assistance—and a substantial amount of public attention—to launch the program. This graphic arts academy was the first of several envisioned for the school. (A related visual arts academy began in 1992.)

The restructuring movement forms a crucial context for interpreting the evolution of vocational reform at Southgate. In the early stages of restructuring (from approximately 1988 to 1991), the principal and teacher enthusiasts urged the faculty to help rebuild a school structure and to engage students in a more "meaning-centered" curriculum. Unlike the conventional department structure, they argued, a house structure would enable cohorts of students and teams of teachers to know one another well and to

pursue academic study through interdisciplinary projects.[2] Teachers were to operate more often in the mode of "coach," akin to an apprenticeship model; curriculum and instruction were to enable students to "use their minds well"; performance-based assessments were to take the form of "exhibitions" and "portfolios"; and advisory activities were to prepare students to pursue well-informed paths toward future work and education.

In this context, a career academy that combined college preparation with work experience would appear to find a natural home. In its goals, its emphasis on an integrated curriculum and "active" modes of learning, its use of performance-based assessment, the mentoring roles adopted by teachers toward students, and the emphasis on collaboration among teachers, the career academy seemed to embody the school's reform aspirations. Further, the academy appeared to develop quickly along the proposed lines in its first year, potentially serving as a visible model of new possibilities for curriculum, instruction, and assessment.

This is not to say that a progressive view of vocational education—or indeed, *any* view of vocational education—had been widely promoted by Southgate's reformers or discussed and debated by Southgate's staff and community. Rather, the academy emerged as the result of successful entrepreneurial activity spearheaded by the district, with visible and energetic support from the principal. Despite its apparent potential for stimulating discussion and experimentation in the school, the academy remained largely peripheral to more "mainstream" reform debates and developments in the school. The principal's expressed enthusiasm manifested itself most clearly in advocacy with the parent and business community, less visibly in strategies for building widespread support and understanding within the school.

Although academy teachers at Southgate were nominally attached to one of the academic "houses," and although they relied to some extent on the assistance and support of the house head and house counselor, they remained separated from the discussions and decisions occurring elsewhere in the school. The academy was physically separated from most of the academic classrooms, occupying space in remodeled shops at the edge of campus. It was programmatically self-contained—the academy's full-time teachers

[2] For an extended discussion of the issues surrounding the effects of reform on departments and departmentalization, see Bowe, Ball, and Gold, 1992; Siskin and Little, 1995. For an analysis of the tensions surrounding subject specialism in restructuring high schools, see Little, 1995.

supplied instruction for academy students in all four of the core academic subjects and in the technical areas associated with graphic arts. Students left the academy only for physical education and the occasional non-academy elective. The founding academy teachers were enthusiastic about the program ideas and about the opportunity to work as a team, but were also fully occupied with the pressing demands of the program development, working long hours on the school-based curriculum and on the external relationships with printing firms that would enable them to supply structured work experience for students. Initial enthusiasms and early achievements both suffered as the program grew and as divisions emerged among an expanded staff. Throughout, the teachers' gaze was fixed inside the academy, not on the wider school community.

At the same time, the pace of restructuring at Southgate proved uneven and the atmosphere tumultuous. The vision put forth in proposals and other school documents presented a substantial challenge to well-established traditions of high school teaching; such traditions (including departmental organization) found reinforcement not only in the habits of mind and deed that pervaded school life, but also in the various externalities to which the school responded—ranging from community expectations to state curriculum standards, university admission criteria, and teacher licensure requirements. Among a faculty of nearly 100 teachers, enthusiasm for these sweeping changes varied widely; even the enthusiasts expressed uncertainty about how to proceed in practice. Staff turnover among teachers was high during these years. (Of 95 teachers employed at the beginning of the 1991-1992 school year, 46 had left and been replaced 18 months later.)

In summary, Southgate provided an environment in which the structure and practices of the conventional high school were open to question, and in which questions about the purposes, content, and clientele of vocational education were being re-examined. At the same time, the rapid pace and escalating uncertainties of restructuring tended to heighten divisions among the staff and render dispassionate conversation difficult. The organizational and physical isolation of the academy staff resulted in few opportunities for informal discourse, while structured forums for discussion and exchange were rare. Still, one could find advocates for the academies among teachers throughout the school, and most teachers reported some knowledge of the academy's purpose and structure. Certainly the answers to our three questions of fit were not immediately self-evident.

Prairie High School

Prairie High School opened less than a decade ago, with a mission to expand opportunities for its 2,400 ethnically and linguistically diverse students. Unlike Southgate, which attempted to convert an established departmental structure to one based on houses, Prairie retained subject departments within broad interdisciplinary divisions ("Cultures and Literature" and "Math, Science, Technology") that encouraged collaboration across subject lines. The school also urged teachers to develop various small-scale programs for students that would provide both curriculum focus and a measure of identity and belonging for students and teachers. At the time the study began, three such initiatives had been launched: a career academy in the domain of "business technology" (with supplemental external funding); an interdisciplinary "house" initiated by a small group of English and social studies teachers; and an arts "consortium" for students interested in concentrating their elective coursework in the visual and performing arts. These early ventures in turn stimulated other proposals, most of them modeled loosely on the idea of a program "major," and most designed to enroll students who would take at least some of their coursework as a cohort. To a greater extent than at Southgate, Prairie's career academy emerged as part of a more generalized and evolving set of experiments in a small scale and curriculum focus.[3]

In certain respects, the teachers in Prairie's career academy echoed the experience of their Southgate colleagues. They credited the academy structure with promoting professional community by organizing a team of teachers who shared responsibility for a cohort of students, and by providing common time for planning and coordinating the students' program. Like their colleagues at Southgate, they nonetheless found the pace and scope of program development to be exhausting, and the constraints of a state-defined model to be problematic. In particular, they found it hard to work on strengthening students' within-school experiences (through coordinating and integrating curriculum, monitoring student performance, and developing new forms of performance assessment), while also extending their opportunities for work-based learning outside of school (finding appropriate "mentor" matches for all juniors). The strain felt by teachers stemmed from limits on their individual and collective ability—working largely on their

[3] Perhaps predictably, the "grow-your-own" approach to these small-scale programs eventually reached a sticking point. The proliferation of proposals led to questions in schoolwide committees regarding the purpose of individual majors, the relationship among them, and the possibilities for curriculum depth and breadth. In addition, teachers began to see such programs as creating differential advantage among teachers in competition for students, material resources, and organizational influence.

own—to develop and sustain the multiple components of a program that fully embodies the dual mission of career and college preparation.

Despite these similarities, Prairie's business academy also differed from the Southgate experience in important ways. One principal difference lay in the environment for restructuring in the two schools. Prairie's staff experienced almost no turnover, and school leaders—administrators, head counselor, and teacher leaders—had been successful in eliciting a high level of involvement from staff. The academy teachers were in the throes of schoolwide debates, and were active participants in the school's various committees and pilot projects (e.g., an effort to introduce "senior projects"). The academy's coordinator was a member of key school-level restructuring committees, while one of its English teachers served part-time as a schoolwide language arts resource teacher.

A second and related difference resided in the staff configuration of the academy and in academy teachers' perceived professional obligations. Southgate began with a single specialist in graphic arts and two academic teachers whose full-time responsibilities and interests lay with the academy. Both were experienced teachers who made an informed choice to join the academy. Prairie's four-person academy team was composed of a business education specialist and academic teachers in English, social studies, and math. The business specialist had been instrumental in starting the academy, securing funding to support a reduced teaching load and common planning time for the four-person team. However, the academy program also relied upon the extended instructional resources (and political goodwill) of a five-member business department to supply a range of course offerings to the academy's students. Enthusiasm for the academy was mixed among the larger department (e.g., besides the academy coordinator, only two of the department members participated frequently and enthusiastically in academy events or special projects). The academic teachers endorsed the mission of the academy, but also took seriously their ties to their academic departments. English and history teachers from the academy attended workshops on integrating the academic and vocational curriculum, but also participated in all-day planning sessions with their department colleagues to design an interdisciplinary academic curriculum. In the second year of our study, one of the English teachers reduced his involvement in the academy to half-time, resulting in a mix of full-time and half-time academy staff. The social studies teacher announced that he would be seeking an administrative post.

To some extent, then, the teachers' broader involvement in school restructuring provided Prairie's academy teachers with visibility for the accomplishments of their students and a forum for advocating the merits of their program. At the same time, visibility and school-level involvement helped to multiply the demands on teachers, and to highlight the divided loyalties experienced by the academic teachers. At Prairie, as well, then, the answers to our three guiding questions could not be taken for granted.

The Questions of Fit: Career Academies and the Restructuring Agenda

At Southgate and Prairie, new forms of vocational education coincide with other streams of school reform. One hallmark of the restructuring movement in secondary schools is the effort to simultaneously develop a schoolwide community—shared goals or vision, more participatory and inclusive governance structures—and to construct more meaningful, small-scale environments for teachers and students. Our three central questions organize one way of assessing the degree of fit among the various reform initiatives.

Question 1: Did the Restructuring Environment Create a Favorable Disposition Toward Vocational Reform?

The integration of academic and vocational education gained substantial visibility at Southgate and Prairie with the introduction of a career academy, which in both schools was granted an unprecedented degree of institutional legitimacy and material support. Nonetheless, structural changes and a new concentration of resources proved insufficient to create a substantially altered view of the school's place in work education. During the period of our study, there was never an occasion in either school on which reform leaders employed the public forum created by restructuring to raise and pursue questions of school purpose. Rather, the disposition toward work preparation and other expressed aims of secondary schooling became evident primarily in the informal exchanges that we witnessed; in the responses that administrators and teachers offered to reports and proposals made during various meetings; and in the interviews we conducted with teachers, administrators, and students.

Views of the New Vocational Programs

Views expressed by others in each school toward the career academy served as our major indication of the possibilities for fit between vocational reform and whole-school restructuring. As described by Southgate's principal, the academy's structural affiliation with a house differentiated it from others in the district that had developed in isolation from the broader restructuring effort; the principal emphasized that the well-publicized graphic arts academy did not "stand alone." Rather, it was to be part of an entire "rethinking of the school: The aim is to get kids—all kids—to confront where they're going from here."

Certainly the principal was a strong public relations advocate for the academy, especially in its early days. However, we observed no genuine evidence that the academy's principles and practices were part of the school's broader "rethinking." Although the academy coordinator had individual access to the principal, it could not be said that academy leadership was well-represented in school decision-making forums, or that the staff of the academy enjoyed any particular influence with the staff at large. Structural connections between the academy and the school's house structure remained largely on paper, and the academy's visibility largely a function of the principal's management of public relations with the printing industry. The principal's patronage served to protect and defend the academy's special resources (small class size, common planning time, professional development funds, field trips), not to inspire broader discourse within the school.

With rare exception (mostly reflected in concerns regarding math and science instruction), teachers outside Southgate's academy were less attentive to the educational mission of the academy than to the resource disparities between the academy and other programs. On the whole, however, they reported that the academy represents an advance over previous vocational offerings at the school; they applauded the effort to intensify academic content for all students and to establish links between the academy and a local community college.[4] At the same time, they did not see their own work as requiring a

[4] This is not to say that teachers are uniformly accepting of the amount of academic instruction that students receive or the criteria on which academic credit is awarded, especially in math. However, some of the criticisms expressed are a consequence of Southgate's staffing pattern, which calls for academic teachers in the career academy to instruct in two subjects. This arrangement is not typical of academies in the state.

shift toward the integration of academic and vocational curricula or the integration of in-school and out-of-school learning.

It seems unlikely that teachers' support for the academy as a small-scale self-contained program would translate easily into support for a schoolwide change in curriculum and instruction. Among the views we heard, the most crucial—from the perspective of our interest in "fit"—are those that center on acceptance of the academy's vocational orientation and those that indicate the academy's place within the larger school. In one relevant example, reflective of other views we encountered, a widely respected young teacher resisted the principal's efforts to recruit her to a position within the academy. She explained her decision on two grounds: her reluctance to make a move that she anticipated would diminish her involvement and influence with the whole school staff; and her belief that she would be asked to subordinate her "love of learning" to an explicitly vocational focus:

> My big reservation—I have a real big one—is that I've been committed to whole school change. I've been really committed to the general population and seeing them go to college, and I've put my heart and soul into that. Philosophically, it's a departure for me. . . . I never really wanted to be part of a school within a school. . . . I've put my heart and soul, I guess, into working with the whole staff, and the whole politics of it all. For four years, that's where my heart's been. I don't know if I'm ready to just go off in a little corner in the school and do my thing.
>
> You know, it might be a really neat opportunity for me that I shouldn't shrug away just because of some philosophical difference. . . . I've been real biased against the academies. I mean, I love the idea of teaching a love of learning. Instead of, "Okay, you've got this job in graphic arts. Here's your tie-in." Everything is going to be then filtered through the lens of graphic arts. . . . I guess I don't want to teach humanities through a lens other than humanities. I don't know—it may be kind of selfish, but I - I don't want to be some add-on program to graphic arts.

Not yet firm in her resolve, she closed by saying, "I have to learn more about it. I have to learn. Maybe - maybe it's not that way." After speaking with other teachers both inside and outside the academy, she declined the position. In the end, the academy was forced to recruit additional teachers from outside the school.

At Prairie, we found an environment more clearly structured to permit or foster philosophical debate that has (at least on occasion) encompassed questions surrounding vocationalism. Vocational programs, personnel, and students were more fully integrated

in the life of the school. From the beginning, the Planning and Restructuring Committee (the main decision-making body of the school) has included the career academy coordinator, who has attempted (with uneven success) to keep issues of work preparation on the schoolwide agenda. The career academy formed a visible part of the school's experiments with assessment, serving as one of three pilot sites for the school's first trials of a Senior Project. A planning subcommittee focused on career-related programs has attracted teachers from a range of subject backgrounds to its monthly meetings—a small group, but one representing science, the arts, agriculture, business, and social studies. Although the school's funded career academy has experienced teacher turnover, openings have been staffed from within the school.

The more central and widely accepted place of specific work-related programs at Prairie could lead one to overestimate the school's acceptance of vocational goals and its willingness to re-examine the schoolwide program. Some teachers advocate the academy program, saying that it is a "step in the right direction" for students who "won't go on to college." Recalling the school's discussions of curriculum integration in the early stages of restructuring, the academy coordinator relates incidents that indicate less than uniform support for work education as one major focus of the curriculum for all students:

> The first year, I talked with the librarian about some of the tools I would hope we'd have in the library that would have to do with researching vocational concerns, and she said, oh, our students don't need that.
>
> My recommendation was that we use the career ed focus [as a way of integrating within math and science]. Like a pre-engineering focus and pre-health focus, and so on, and work on ways to integrate those concepts across the curriculum. And the division leader laughed at me. . . . It's like, okay, I haven't sold you on this one yet, have I?

She concludes that "the idea of career preparation is a second-class citizenship goal for the high school curriculum, according to many, according to the majority of the people in the high school." At the same time, she adds,

> Our principal has moved to the concept that we are in the business of career ed. I mean, he publicly states that over and over again now. I think he recognizes that he has to say that, as a leader. That career ed is our business. It's just that there are different methods of getting there.

Both of these schools provide evidence of reasonably solid support for a school-within-a-school model that combines strong academics with a coherent introduction to an

occupational field. Absent at both schools were the most divisive and overt signals of second-class status that we had come to associate with vocational education elsewhere—the explicit skepticism expressed by administrators or teachers about work preparation ("I don't think it's our job to prepare kids for jobs"), the complaints by vocational teachers that their classes served as a "dumping ground," and the steady decline in staffing or program resources (Little, 1993; Little & Threatt, 1994). The image of vocational education, insofar as it was represented by the career academy, was substantially stronger than it appeared in other comprehensive high schools.

The Importance of the "Dual Mission"

Fundamental to elevating the status of the career academies at Southgate and Prairie was their emphasis on a dual mission: career preparation and college preparation. In recruiting students to an academy, teachers emphasized this dual mission—students came to the academy persuaded that they would be helped to prepare for college, while also acquiring marketable skills. The college preparation side of this dual mission took precedence in both academies. A "college prep" designation was the academy's ticket to acceptance within the school. Although all the academy teachers formally embraced both college and career preparation, the academic teachers tended to speak with special intensity of their academic curriculum, emphasizing core course offerings that were deemed comparable to those taken by non-academy students at these grade levels (algebra and geometry; chemistry and biology; world and U.S. history; and English literature).

The emphasis that academy teachers placed upon the college preparatory aspects of their program brings home one clear message: in this setting, "academic" knowledge bears a stamp of validity that "practical" or "work-related" knowledge has not achieved (see Lewis, 1993). Acutely aware of what was described as the "stigma that's attached to the word 'vocational,'" academy teachers at Southgate emphasized their college-bound curriculum while working to eliminate "the old differentiation between vocational and academic." That the "academic" enjoys greater status in the high school is hardly a new observation, but it underscores the basis on which career academies earn their reputation within these schools. Few academic teachers have the experience of working in fields outside teaching that would enable them to attach to *workplace* knowledge the same sophistication, complexity, coherence, and dignity that they attach (rightly or not) to the

school subjects. Further, most can point to examples of "practical" learning in schools that, by comparison to complex academic tasks, seem simplistic.

Their efforts to deliver on both promises left the academy teachers vulnerable to criticisms of two sorts. First, the academy had to demonstrate that its academic curriculum met the college preparatory standard. At Southgate, academic teachers questioned the administration's decision to staff the academy with teachers assigned to teach two subject areas. At Prairie, concern for academic reputation contributed to the reluctance expressed by English and social studies teachers to incorporate "vocational" content in their courses.

In addition, the academies felt pressure to establish the credibility of their connections with industry. At Southgate, external support from the printing industry and other funders remained contingent upon a credible program of preparation for work in the field of graphic arts. In the original conception of the academy, connections between school and work were to take several forms: extensive curricular links between graphic arts experience and academic study; regular field trips to graphic arts firms; a sequence of structured work experiences culminating in a paid internship during the senior year; and guaranteed employment upon graduation. A steering committee made up of academy teachers, site and district administrators, industry representatives, and community college instructors formed a mechanism for deciding program priorities and mobilizing support—but it also was a mechanism by which industry asserted its interests in the school program. Over time, each of the planned program components proved difficult to realize. (For example, the industry partners were slow to provide internships or other opportunities for structured work experience.) Prairie's academy coordinator created "partnerships" of varying strengths with quite different kinds of firms—a national insurance firm, a major soft drink company, the state highway agency, and others. From these arrangements, the academy coordinator sought field trip and job shadowing opportunities, mentors for the juniors, classroom speakers, and participation in a few special projects (e.g., the soft drink firm helped sponsor a schoolwide "sober celebration" activity prior to graduation). However, the school had no mechanism comparable to Southgate's steering committee to define the form and content of a partnership agreement; the result was a series of quite idiosyncratic ties that required substantial teacher time to create and maintain.

Although we uncovered fewer overt signs of stigma attached to these new forms of vocational education, we nonetheless found subtle indications that for most teachers and most students, the pursuit of academic study and work preparation remained quite separate and differentially valued enterprises. The strength of the symbolic support for the academy resided mainly in the administration and in the academy's external constituencies. In both schools, support from non-academy teachers rested less on a concrete understanding of the academy's premises and practices than it did on a rather vague grasp of its dual mission (preparation for both work and postsecondary education). Teachers did not regard the academies as a *stigmatizing* environment in which to teach, but few seemed to view it as an *attractive* opportunity. Even with its special resources, Southgate's academy was unable to recruit the required number of academic teachers from within the school's own ranks, and was forced to recruit outside. Prairie's academy also suffered some degree of staff turnover, though replacements were found within the existing school staff.

At Southgate, more than at Prairie, the substance and status of work education remained vulnerable despite manifest improvements. Because special resources such as small class size and reduced teaching load represented high and continuing costs, and because they were a source of resentment on the part of non-academy teachers who saw themselves as carrying a heavier workload, they also made the academy's special status precarious. Further underscoring the academy's vulnerability was the relative absence of occasions on which the academy staff could "educate" colleagues about their aims and accomplishments, or on which non-academy teachers might air their curiosities and concerns. At Southgate, we encountered no opportunities for teachers to tackle the questions of academic and vocational preparation as a matter of schoolwide concern. One might expect that a restructuring environment would open up communication in a school, spawning more frequent, focused, and widespread talk among teachers, counselors, administrators, students, parents, and community members. Yet we observed virtually no structured forum in which academy-based and house-based teachers might discover the commonalities or differences in one another's views and priorities, discuss and debate possibilities, or build upon points of continuity in their respective programs. We found no mechanism by which the teachers and students in the academy, or their community partners, could begin to develop a more widespread understanding of what work knowledge looked like. Despite the proclaimed schoolwide goal to prepare students for

"productive work life," we found no evidence that teachers outside the academy had given any explicit attention to what that might mean in their own curriculum planning.

At Prairie, the schoolwide committee structure gave legitimacy to such discussions and provided a forum in which they could take place. Even under these more favorable conditions, however, advocates of work preparation found it difficult to produce any extended consideration of fundamental school purposes and outcomes. Meeting agendas were crowded, typically allotting no more than 20 minutes to individual topics (and often, a mere 5 or 10 minutes). One teacher (not in the academy) recalled the early days of the school and its rallying cry of "academic success for all students":

> I think the idea [was] that somehow we could magically make this an academic place where every kid is going to be able to go to college whether they want to or not. It didn't matter how much [the academy coordinator] told us about the world of work. She was one voice, telling us about the world of work. We said, "Be ready for college." She said, "Be ready for the world of work." We said, "Yeah, that's fine, but be ready for college."

Demonstrated Success with Students

The enhanced status of vocational education at Prairie derived not from a consensus achieved through discussion and debate, but mainly from the dual mission embraced by the career academy and from its demonstrated success with students. Both academic and vocational teachers within the academy were respected for their subject knowledge and commitment to students, and the academy proved successful in securing the attendance and academic performance of students who might otherwise have failed or dropped out. A comparison of the academic transcripts and attendance records of 11th-grade students in the career academy, students in a cohort-based "house" program, and students assigned to mainstream academic classes reveals higher attendance rates and grade point averages for those in the school-within-a-school structures; the differences are particularly marked for those students most often viewed as "at risk." For example, average attendance for African-American males in the academy was 93%, compared to 84% for their peers in the regular program; comparable differences hold for Hispanic and Filipino males. These same groups earn a mean GPA that ranges from 2.4 (African-American males) to 3.0 (Hispanic males) in the academy, while their peers in regular classes fail to achieve a passing GPA (.94 and .79, respectively; Filipino males average 1.53). Although 9th-grade performance still proves the strongest predictor of GPA in the

11th grade, the academy does seem to demonstrate an independent effect on those measures (the overall GPA of entering students rose from 2.0 to 2.6 by the end of their first semester in the academy). Finally, we examined course-taking patterns across groups, discovering that students in the academy are enrolled in courses that earn credit for university admission, but enroll in these courses less often than students in the other groups and are somewhat less likely to earn the requisite C grade.

We have less evidence that the occupational focus of the academy yields value beyond what the students attribute to the small scale and sense of community, the press for academic achievement, and the close attention and steady encouragement of the team of teachers.[5] That is, we have no data on students' out-of-school work performance during high school or on the postsecondary work or educational record of academy graduates. When asked to write about their career aspirations and about the career focus of the program, approximately one-quarter of the academy juniors named business or business-related careers. The remaining students named a variety of aspirations—various occupations in the medical field, lawyer, psychologist, teacher or professor, auto mechanic, engineer, broadcaster, photographer, athlete, beautician. Some of these occupations have traditionally been pursued in a small-business setting, suggesting that students might reap practical benefits from their business-related training. In several cases, the career choices identified by an individual student are sufficiently different from one another—"social work or data processing"—to make us wonder about the extent to which students attach concrete images to these career labels. Regardless of its precise fit with students' career aspirations, however, the academy appears to induce or reinforce a general sense of "planfulness" among these students at a time when they are nearing transition from high school to work or higher education.

The Changed Image of "Vocational"—On a Limited Scale

Overall, the restructuring environment in both schools was one in which new forms of vocational education—most specifically the career academies—could be made visible and could gain the acceptance and admiration of teachers, administrators, parents,

[5] To address the question of "added value," Robert Crain and his colleagues at Teachers College, Columbia University have been conducting a study of graduates from selected career magnet and comprehensive high schools in New York City. Their preliminary analysis, as yet unpublished, suggests that graduates of focused career magnet programs are more likely to demonstrate group problem-solving ability, and are more likely to credit their high school education with supplying them with marketable skills (Anna Allen, personal communication, April 3, 1995). This analysis, when complete, will also compare postsecondary rates of employment and college attendance for the two groups.

and community. Contributing to that more favorable image were the symbolic support of influential advocates inside and outside the school, an academically heterogeneous student clientele, and a standard program of academic coursework (not remedial). For industry partners—but not typically for the school's academic teachers—support was also linked to the school's commitment to achieve credible connections between school and work.

The implementation difficulties experienced by the career academies were not unusual, and parallel those described elsewhere (see Andrew, 1995; Pauly, Kopp, & Haimson, 1994; Stern et al., 1992). Our aim here is not to dwell on implementation challenges associated with academies, but to suggest that (1) the academy's dual mission helped to secure the support of a wide range of constituencies, but was difficult to achieve uniformly; (2) the scale of the implementation task tended to isolate the academy from the rest of the school, even at a time when the environment may have been most open for broadening the integration of academic and vocational education; (3) the academy's continued isolation was exacerbated by the absence of an effective forum for schoolwide discussion of what whole-school "restructuring" might mean; (4) school-level leadership acted to support the academy as one of several parallel ventures in reform, but stopped short of promoting larger scale discussions or changes.

Enduring differences in teachers' goals for students—or the "big picture," as some characterized it—tended to revolve around the legitimacy of work preparation in the high school (though they were often treated as if they centered on the value attached to academic subject matter). For the business teachers, the big picture places work preparation in the foreground. As one business teacher relates,

> I think the biggest disservice we can do to a student in high school is not prepare them for the world of work. . . . I think every curriculum needs to be tied to the world of work somehow. And we need to really apply all of these classes and all of these things to modern society . . . versus how much U.S. History do they know or how many works of Shakespeare have they read.

The business teachers were united in this view; the academic teachers varied in their outlook, though all of them supported a program that supplied a curriculum focus and that increased students' postsecondary options. For at least one of the academy teachers and for several of his colleagues outside the academy, the "business" emphasis was ideologically problematic. In particular, he expressed reservations about the

unquestioning attitudes toward business and industry that he encountered among the business teachers:

> We don't get students to interrogate enough the type of system they are in and what role work plays in that situation. . . . This business thing, their pedagogy is "learn the skills that are going to make you a good business person, a good worker," but it's not really getting you to interrogate the society you live in and make changes in society. It's kind of like "go along with the status quo." And I have problems with that.

These differences in what constitutes the "big picture" were well-known and often discussed in meetings of the academy teachers (though rarely in any public forum outside the academy). In the short run, decisions were reached and accommodations made. The teachers worked together to plan curriculum projects, develop the academy's mentor component, and assess students' work. In the longer run, the differences contributed to turnover among the academic teachers.

In effect, career academies gained acceptance within the school to the extent that they came to look more like academic programs. However, the mainstream academic curriculum did not, in turn, come to reflect an increased interest in the vocational utility of a high school education. One rare exception was a junior-year research project conducted in one pair of English and social studies classes at Prairie, in which students were asked to imagine themselves in a career five years after high school, and to conduct interviews and library research that would give them a clearer understanding of what such a career choice would entail. On the whole, however, we did not find academic teachers or departments reconsidering how curriculum, instruction, and assessment might give greater prominence to work-related outcomes.

Question 2: In the Search for a More Coherent Curriculum, Did the Schools Embrace Integrated Academic and Vocational Curricula?

An emphasis on "integrated" and "interdisciplinary" curricula pervaded the restructuring atmosphere and rhetoric at both schools. At Prairie, parents were informed that "the school curriculum has been designed around five divisions instead of the usual 13 to 15 departments. There is an interdisciplinary curriculum in the four-year English and social science humanities program" (*Prairie High School: A School of the Future*, 1993). According to school documents at Southgate, curriculum was focused on preparing "all students to use their minds well:"

> To us, using one's mind well is the integrating force behind a thinking, meaning-centered curriculum in which we use California Curriculum Frameworks as a vital resource. We stress depth over simple coverage. We are seeking an interdisciplinary, inquiry-driven core curriculum because we believe that real understanding and problem-solving require an integration of different skills, knowledge, and disciplines. (*Southgate House Plan, 1988-1993*)

In both sites, the career academy's efforts to integrate curriculum content across subject lines were compatible with a move officially endorsed by the larger school. Schoolwide inservice activities tended to focus on integrated curriculum and on performance-based assessment. Examples include Southgate's two-week "summer camp" workshop held in August, or the eight full-day interdisciplinary team planning days made available at Prairie. Administrators and house-based head teachers at Southgate used regularly scheduled house and team meetings to push integration within the academic curriculum. In both the academy and the houses, a flexible block schedule provided structural support for a more project-oriented curriculum. Southgate's academy teachers saw this move as more closely approximating conditions of work outside school: "This is a simulation of workplace learning."

Nonetheless, it would be easy to overestimate the schoolwide commitment to an integrated curriculum if one confined the evidence to school documents and the reported views of administrators and house heads. Among the larger pool of teachers, we uncovered substantial disagreement about the worth, nature, and extent of curriculum integration. As one Southgate math teacher recounted,

> There was a tremendous push to put math and science together, and [the science chair] and I worked together very well, but [we] also understood that math, by itself, is a science, and it supports the other sciences, but you couldn't have a math class tied with biology and [still] teach the math curriculum. . . . You know, the study of mathematics is by itself, it stands alone.

At both Southgate and Prairie, the most active pursuit of interdisciplinary curricula occurred among the English and social studies teachers, although some Southgate teachers (especially those with long years of experience) also worried that emphasis on crossdisciplinary projects would erode the coherence of specific courses or would compromise an overall departmental mission. At Prairie, the social studies

department participated in designing an interdisciplinary final exam, but also continued to give a departmental final.

Perhaps most telling, even teachers who supported a measure of cross-subject integration balked at the idea that a premium be placed on concepts or skills with a work-related or other out-of-school application. A Southgate math teacher maintained the following of the math curriculum:

> There isn't anything you can throw out. You can't say, "Well, if you can't find an application for it, let's throw it out." Because this application may come [when you are] an advanced math student, but you need the building blocks beforehand.

In this environment, the founding teachers in Southgate's academy constituted a genuine anomaly. During the first year of the Southgate academy's operation, the three academy teachers forged strong interpersonal ties and worked to create a seamless curriculum in which old distinctions between "academic" and "vocational" might be eradicated. The graphic arts specialist, discouraged by a short stint teaching in a traditional vocational program, was attracted to the academy by its emphasis on strong academics linked to meaningful workplace learning. The academic teachers found appeal in the promise of an integrated curriculum and in the academy's small cohort of students. The humanities teacher, who had arrived in teaching after beginning a career in nursing, explained: "I have a good background in science and a fairly good background in math. I have a good background in philosophy, health. As far as integration, it all looks integrated to me."

In successive years, however, the Southgate academy suffered from conflicts over the preferred nature and extent of curriculum integration. In the first year of the academy, the three original teachers had prided themselves on attempting both cross-subject integration and integration of academic and vocational content. They were united in their philosophical commitment to the academy's premises. The two young teachers who joined the academy in its second year after an external search, and who assumed responsibility for the 11th-grade curriculum, did not enter with the same philosophical disposition. Nor did they have the opportunity to spend concentrated time prior to the school year learning something of the academy's history, and working out what the 11th-grade curriculum might entail. Concerned with what they understood to be their obligation to supply "college preparatory" academics, the new teachers resisted pressure

from both the 10th-grade teachers and the industry partners to concentrate on integrating their curriculum with the graphic arts focus. In a strategic planning session involving the industry partners, the history teacher pressed the case:

> We need some resolution of the philosophic problem: Can we provide an advanced academic education and a career education at the same time? . . . There's the issue of "natural" integration points. I can do freedom of the press, but there are a lot of things in history that are not graphic arts. And I'm opposed to doing integration that's a stretch. Are we cheating the kids because we're not doing enough integration? Or because we're doing too much? There are philosophical issues that are not resolved.

In a subsequent interview, his partner expressed skepticism about the value of integrating the traditional academic curriculum with vocational content and applications:

> I don't really think that integrating everything is a good way to teach because I think then you lose out on a lot of the important information that needs to be taught, and that you're going to have kids who are going to leave lacking basics that they need. They'll know their graphic arts and maybe they'll know the history of graphic arts, and maybe they'll know a little bit about the chemistry, but they're going to miss out on a lot of other stuff that needs to be taught. And I've found it extremely difficult with the math that I was teaching. You can't integrate a lot of the math in graphic arts. There's proportion, there's percentages, and there's basic arithmetic and multiplication. But all this other stuff you have to teach isn't in [graphic arts], and it's hard to integrate it.

The widespread (though uneven) support that one encountered at both schools for curriculum integration created a certain latitude for academy teachers to experiment with connections across *subjects*, but the support tended to stop short of integration with work or other forms of "practical" knowledge. To some extent, teachers' reluctance appeared to stem from a shortage of appropriate and powerful examples. Over and over, we found teachers wrestling with the problem of what would constitute meaningful "applications" of knowledge.

At Prairie, efforts to join English and social studies were widespread in the school; math and science, though both engaged in innovative curriculum development projects, tended to proceed independently. Like their non-academy colleagues, the English and social studies teachers assigned to the career academy used their adjoining rooms and flexible block schedule to organize a small number of interdisciplinary projects for their cohorts of 10th- and 11th-grade students. From their perspective, however, the main advantage of the team-based staffing and the shared responsibility for

a single student cohort was the opportunity to know students well. Their work was joined principally not through curriculum but "through the kids themselves." In regular staff meetings, academy teachers shared observations about individual students and agreed on strategies for keeping attendance and performance high. Parent phone calls were frequent, and students were well aware that their progress was being monitored collectively by the team. (Students were generally appreciative of the team's close scrutiny; even those who had been resentful at first were gradually won over as they saw their grades improve.)

Under pressure from the academy coordinator, Prairie's English and social studies teachers agreed to participate in a special state-supported project to develop curriculum that would more closely integrate the academic and vocational strands of the program. (The math teacher declined to participate, though not for reasons tied specifically to the purpose of the project.) This state project funded the academy team to participate in a series of two- and three-day meetings with teams from other similar academies. Over time, the project became the focus of escalating tensions within the academy; the more familiar the academic teachers became with what their colleague in business valued as "integration," the more steadily their acquiescence turned to indifference and then to opposition. The differences in perspective and priorities that were acknowledged but muted in their daily work (perhaps because each could see that the others shared a commitment to the students) were intensified in the curriculum workshop setting, where it became clear that the intended "product" was one that not all could accept. As one of them summed up: "We never could pull that together because we couldn't have the same vision or outlook about it, and the same commitment."

Thus, the career academy stood out as the single location in each school where teachers gave explicit attention to linking academic and vocational content, but the academy itself was beset by conflict over the extent to which content should be "integrated" within the school curriculum. Further, both academies were thwarted in their efforts to establish genuine work-based learning opportunities for students, or to link out-of-school experiences more tightly to school-based instruction. At Southgate, time pressures and other setbacks resulted in several failed attempts to develop "modules" that would structure students' workplace learning experiences and tie them to school-based instruction. Summer internships were successfully arranged for only a fraction of the students. At Prairie, the academy relied mainly on individual matches with outside "mentors" to acquaint students with work and workplace environments. Arranging the

mentor matches consumed large amounts of teacher time and yielded only partial success. (Journal entries written by students suggest that only about one-third of the students found the mentor relationships rewarding, another third were partly satisfied, and a full third were frustrated and disappointed when their hopes were not realized.)

Curriculum integration—both within the school program and in the design of workplace experience—has proven perhaps the most difficult and contentious challenge faced by the academy teachers. Academic teachers were attracted to the academy by its small scale, its commitment to student success, and its special resources (small class size, field trip opportunities, additional planning time). Most were less certain, on the whole, that the program's purposes would be achieved by elaborate attempts to "integrate" academic coursework with the content derived from vocational fields. Two of the four academic teachers at Southgate expressed frustration with persistent pressures to integrate more of their curriculum. Two of the three academic teachers at Prairie (English and social studies) participated regularly in the state-sponsored curriculum integration planning meetings, but did not express much satisfaction with the progress they made.

The problems of achieving a curriculum integration strategy can be cast in part as an issue of policy or philosophy ("Is it the right thing to do?") and in part as an issue of capacity ("Does this group of people have the knowledge and the other resources to do it?") With regard to policy or philosophy, teachers were divided. Some teachers (the founding three at Southgate, and the vocational specialist at Prairie) espoused a vision of a fully integrated curriculum. Other teachers expressed reservations, arguing: (1) that one prepares a student better for a career by using the academic discipline as a vehicle for honing students' intellectual skills and work habits, and for building their confidence as learners; (2) that too much integration will result in eliminating many of core concepts and topics that teachers believe are important, thus "watering down" the academic curriculum; (3) that integration also tends to narrow the curriculum, sacrificing some broader, nonvocational, purposes of education (such as social and political awareness), and (4) that integration of course content may not be as desirable or as feasible as connecting "through the kids" (i.e., by activities done in common, by all teachers getting to know the students well and sharing a commitment to them, or by monitoring student progress).

The capacity of teachers to achieve an integrated curriculum rested in part on their individual and collective knowledge and skill, but also on other kinds of material, organizational, and social resources that range from sufficient planning time to parental acceptance. On the whole, and not surprisingly, teachers did not know much about one another's subjects, and often found it hard to imagine any but the most superficial forms of linkage. (Southgate's founding humanities teacher, who felt comfortable with all the core subjects and saw integration everywhere she looked, was an exception.) Multiple demands on their scarce planning time and infrequent professional development opportunities compounded the difficulty of achieving even those forms of integration that all could accept.

Question 3: Did the Schools Enable Teachers To Bridge the "Two Worlds" of Academic and Vocational Teachers?

Both schools have attempted to restructure in ways that create new opportunities for collegial work among teachers. By its design, the Southgate plan would enable teachers to bridge the gap between the academic and the vocational in two ways: by staffing career academies with full-time academic and vocational teachers whose schedules permitted daily collaboration; and by locating career academies within the wider house structure of the school. A Southgate teacher identified the highlight of her experience in the academy as "the professional synergism" that permeated the first year's collaborative work. Prairie's academy structure also gave academic and vocational teachers a common purpose and daily opportunity for collaborative planning, and tied the academy to an interdisciplinary structure (the "divisions").

The evolution of new ties between academic and vocational teachers proceeded along two paths in these schools—one that followed the development of the academy itself, and the internal relationships between academic and vocational teachers; and a second that charted the individual and collective relationships between academy teachers and their colleagues outside the academy.

At Southgate, the collaborative environment that was forged within the academy with some considerable success in its early stages proved more difficult to sustain when the program undertook rapid growth in its second and third years. As the program doubled and then tripled in enrollment, with the addition of each new student cohort, the pioneers found it difficult to supply each new group of students and each newly hired

teacher the same conditions that the first cohort had enjoyed. By the end of the second year, teachers were confronted with the possible loss of their common planning period and their summer curriculum development stipends. Reductions in professional development resources exacerbated these problems, as generous subsidies for attending outside conferences and institutes were cut back. In the eyes of one of the newcomers, the original teachers had been "treated like royalty," but "now it's business as usual."

More crucial, however, were two developments that resulted, over time, in high turnover among the academic teachers. The first development was the rapid increase in program size and scope; the founding teachers who had treasured their intimate working relationship now had to make room and time for others, at precisely the time when the program development burdens escalated dramatically (e.g., adding a workplace internship component to the program). In the eyes of the teachers, the program's burdens began to outstrip the felt benefits. The second and less tractable development, despite the effort to recruit and hire teachers who appeared compatible with the academy's mission, was an evolving split over curricular priorities (and associated expectations regarding program development and professional development). The split was not between academic and vocational specialists, but between the founding team members and those academic teachers who were later arrivals. Although teachers throughout the school were being asked to develop a more integrated curriculum, the emphasis on integration between the academic curriculum and work-related applications was unique to the academy. Increasingly, the academic newcomers felt themselves to be beleaguered defenders of what they considered to be curriculum integrity consistent with the program's claims to be a "college prep" program.

According to the published plan, the Southgate academy was located within one of the school's academic houses. In practice, there was little interaction between the academy teachers and their colleagues elsewhere in the school. Physically, the academy was located in renovated facilities on one edge of campus. Academy teachers tended to gravitate to the graphic arts room and the other large, airy classrooms in the same building, rather than spending time in the house offices. Meeting as an academy group quickly became habitual among the original teachers, a habit supported by a common planning period each afternoon. Rarely did a representative of the academy join the regularly scheduled house meeting, and never did all the academy teachers attend. Nor

did any teachers from the house routinely enter into the discussions among the academy teachers, although the house head and house counselor attended meetings when asked.

The separation between the academy and the school-at-large opens questions about Southgate's schoolwide goal to prepare students for a "productive work life." Had there been regular contact between academy and house teachers, one might have anticipated some discussion about how that goal might be realized through the school's curriculum or through the community service and senior project opportunities that were under consideration.

Prairie's academy, from its beginning, displayed an uneasy accommodation to the dual mission of career and college preparation, and the close integration of academic and vocational curriculum. What joined the academic and vocational teachers, and created something of a genuine team ethos, was the shared belief that the program's small scale, team organization, and curricular focus provided an important climate of support for students. In its coordinated approach to recruiting, supporting, and monitoring student progress and well-being, the group looked and acted like a team. Yet philosophical agreement continued to elude them. Team members were divided (not entirely along academic-vocational lines) in the goals they expressed for students, and the ways in which those goals played out in the classroom. Such divisions are not unusual among high school teachers, but rarely are they made the focus of collegial exchange. In this instance, the formal expectation that there be some form of integration served to make teachers' views and preferences public, and to bring deeply felt differences to the surface. In one example, the teachers wrestled over the premises and imagery attached to "total quality management" as a framework for organizing the academy's work. Objecting to the idea that students should be "satisfying 'customers,'" an English teacher expostulates: "They're not there for *me*. They don't have to sell *me*. They have to convince me—they have to convince *themselves*—judging against a standard, that something is a good piece of work." The conversation unfolded this way:

> Coordinator/business teacher: There's another term we could use—stakeholders. Someone who has a stake in the student's learning.
>
> English teacher: The student is the primary stakeholder. The fact that they come to school on time is not for me, it's for them. My job is to present the best that I can to them. Do homework not because I tell you, but because we're engaged in a particular project.

> Social studies teacher [finding the imagery of parents and teachers as the student's "customer" to be acceptable]: I think this is a way to get kids to think about why they're here. I agree that the student is the primary customer.
>
> English teacher: I won't stand in the way if you agree on the language of customer, but I think this is an important philosophical point. . . . It's not just terminology. This is a bigger discussion about education, and whether it's going to be student-centered or whether it exists to serve external purposes.

Such discussions and debates were relatively common within the Prairie academy. Did they close the gap between academic and vocational traditions? It would probably be fair to say that the academic teachers came to admire the expertise of the vocational teachers, and to appreciate the motivational effects of a common curricular focus. They were also increasingly willing to enter into discussions about the possibilities for curriculum integration. Two of the three academic teachers participated in the series of state-funded workshops on curriculum integration. It also seems clear that the academic teachers were never fully persuaded that the vocational emphasis—as they interpreted it—was in the best interests of the students, nor were they emotionally engaged by the content of the business curriculum and the challenge of establishing closer relationships with the business community, although one of them invested substantial amounts of time in recruiting mentors for the juniors. At the same time, the business teacher professed never to understand or accept the fact that the educational passions of the academic teachers lay elsewhere. She was continually frustrated by the disinterest that the teachers showed in accompanying students on field trips to industry partners, or in pursuing paid summer internships for themselves with the business partners. She was convinced that such experiences would open teachers' eyes about the curriculum integration possibilities; the teachers compared such uses of time with more favored alternatives.

At Prairie, unlike Southgate, the academy teachers all maintained close ties with their subject departments. These affiliations helped to pull the academic teachers toward subject-specific interests and activities or, in the case of English and social studies, in the direction of interdisciplinary planning independent of a career focus. In the full-day interdisciplinary planning sessions we observed, the academy's English and social studies teachers participated actively in discussions without ever once mentioning potential curricular links to the world of work. In interviews, they cited pressures from the department as a reason for resisting projects that built on the integration of academic and

vocational content and outcomes; to do so would cost them time needed for curriculum coverage expected by the department (or more likely to be approved by the department).

Most of the discussion about integration of academic and vocational education took place within the confines of the academy—but not exclusively. The school's Career Technology Subcommittee included teachers from the arts, science, and social studies. It would be an overstatement to say that concerns regarding career preparation were widespread, but they were visible outside the academy in ways that we did not find at Southgate. Progress was slow, and long-standing stereotypes proved difficult to displace. Despite widespread acceptance of the career academy program at Prairie, the academy coordinator had difficulty in stimulating wider interest in vocational links. She reported,

> I've always been in position to give input, but my viewpoints aren't listened to. There's a point where sometimes I think I get ignored. Why I get ignored may have to do with some of the other prejudicial feelings that I sometimes feel across the campus in terms of where my "place" is. That's that funny little thing about high schools. Like, how would this person [know]? She's a vocational teacher . . . it's really weird.

In both sites, then, the career academies created an environment in which the boundaries between academic and vocational were made more permeable. The academy structure itself promoted teacher community in two fundamental ways: by organizing a team of teachers who shared responsibility for a cohort of students; and by providing them with common time for planning and coordinating the students' program. These structural elements were reinforced by a program philosophy that emphasized the dual focus of career and college preparation, careful monitoring of students' attendance and academic work, and integration of the "academic" and "vocational" elements of the curriculum; this philosophical orientation was to some extent embedded both in the Partnership Academy legislation and in the schools' plans for restructuring.

Teachers nonetheless encountered certain impediments to professional community. First, the academies assembled teachers with quite different backgrounds, subject specializations, and educational philosophies. Although they tended to share support for the basic goals of the academy, teachers were not necessarily in agreement about how those goals should be achieved. Teacher turnover in both academies was greatest among the academic teachers. Academic teachers who left the academies responded to what might be termed "pushes" and "pulls." Among the forces that pushed

them away from the academy were the extraordinary time demands for program development and coordination, and the philosophical bind created by competing curriculum priorities. In particular, teachers found it hard to work on strengthening students' within-school experiences (through coordinating and integrating curriculum, monitoring student performance, and developing new forms of performance assessment), while also extending their opportunities for work-based learning outside of school (finding appropriate mentor matches for all juniors or structured summer internships). The strain felt by teachers stemmed from limits on their individual and collective ability—working largely on their own—to develop and sustain the multiple components of a program that fully embodied a dual mission.

Other forces pulled teachers toward the subject department. This was especially the case at Prairie, where teachers were tied to subject departments (English, social studies, math, and business) and to interdisciplinary divisions, each with its own agenda and demands. Among the external pulls were the subject background they held in common with colleagues, and the subject resources available within a department or larger divisional structure; the consolidation of time demands (one less set of meetings); and the relief from trying to accomplish (and explain) a curriculum that achieves *both* academic-vocational integration and interdisciplinary connections. At the same time, the pull of the academy itself was substantial, at least for some, and decisions to leave did not always appear to come easily. Perhaps the central point is that the professional ties we witnessed at Prairie served less to bridge the two worlds of the academic and vocational than to reveal and intensify teachers' divided loyalties. The conditions that attract teachers and students to these newly configured programs, that underlie their stability and success, and that frame their relation to the larger school, thus deserve greater attention—especially in light of the convergence of multiple reform activities.

Finally, the "bridging" of separate teacher communities in both schools was complicated by the multiplicity of activities pursued under the broad banner of restructuring. Many teachers participate in more than one of these activities—interdisciplinary teams and within-subject projects, schoolwide committees and out-of-school networks, a long list of professional development events, and more. It is not immediately clear what philosophical glue holds these various activities together. In the absence of a common philosophical thread, and given the many reform roads available to travel, teachers tend to follow the paths best known and most appealing to them. Quite

apart from the fatigue factor, which figures substantially in teachers' accounts ("we're being 'meetinged' to death," or "I'm having to withdraw from some of this stuff"), teachers' intellectual interests, social ties, and emotional commitments all figure in the investments they make—and in their decisions to sustain or abandon those investments over time.

The Impetus and Capacity for Comprehensive Vocational Reform in Two Schools

At the outset, we speculated that the prospects for closer ties between academic and vocational education rested on the impetus provided by specific reform initiatives to take work preparation seriously as part of education for all students, and on a school's capacity to undertake the necessary structural and cultural changes. Concentrating on the internal environment of the school, we assessed the impetus and capacity for such movement by examining the fit between comprehensive programs of restructuring and specific reforms targeted at vocational education. Our major findings may be summed up in five points:

1. The multiple currents of reform in these schools run along separate channels. Although they are given a comprehensive and coherent face in public documents, each has its own internal advocates and its own external sources of pressure and support. Each pursues its own strategies for building the capacity to act—professional development activities, collaborative curriculum planning, appeals to administrative support, and the like.

2. These separate channels parallel one another in important ways. That is, the directions pursued by vocational reform activities—seeking curricular connections, broadening students' understanding of occupational possibilities, building students' capacity for independent work and cooperative endeavors, and emphasizing assessment based in performance—are compatible with the spirit of school restructuring more generally. The restructuring environment is assuredly conducive to new forms of vocational education.

3. The distinction nonetheless remains between a "work-bound" and "college-bound" curriculum. We find little indication of support for wholesale rethinking

of the high school experience in ways that would broaden the conception of work education for all students. Although the principals of both schools consistently signaled their support for the career academies and for career education more broadly, they supplied equally consistent reinforcement for efforts to strengthen the traditional academic curriculum. Many academic teachers remained skeptical of a curriculum that would emphasize practical applications, especially if they believed that the search for practicality would take precedence over academic priorities—the key concepts or topics typically associated with core academic subjects.

4. To the extent that these restructuring schools have pursued an altered conception of vocational preparation, they have done so by means of a rather tightly bounded school-within-a-school program. In each school (though to a greater extent at Prairie), such programs have earned a measure of internal and external support by embracing a "dual mission" of academic and career preparation, and by demonstrating the ability to strengthen students' attendance and performance records. Both academies succeeded in attracting a fairly heterogeneous population of students who enrolled voluntarily in the academy, and who accepted rather stringent conditions and requirements in doing so. (That is, this does not have the feel of a dumping ground either to teachers or to students.) Students have completed graduation requirements in the core academic subjects, but tend not to complete the requirements needed for admission to the state's four-year colleges and universities. Neither academy was able to construct structured work experiences for students on a scale (number of students) or for a duration that would enable us to examine the "value added" of a career focus in the academy. To the extent that the program supplied students with an understanding of career or of a particular industry (printing, for example), it did so almost entirely through a sequence of elective courses, in-school projects, and extracurricular activities. In effect, the promise of a "dual mission" is both central to the improved image of work preparation and proves challenging to fulfill.

5. Restructuring has made schooling more "public" in these schools. Both in the school-level governance structures and in the exchanges underway in teacher teams, we find more frequent discussion of curricular priorities, school and classroom practices, learning outcomes, and student work than has been typical in schools previously studied. In the development of portfolios, "exhibitions," and

senior projects, we find a move toward more visible demonstrations of student work. However, these discussions and new forms of student assessment have not served as the basis for re-examining assumptions about the nature of vocational preparation and its relationship to academic study.

Conclusion

We have begun to illuminate the specific points of continuity and conflict that schools encounter when they attempt to move on several reform fronts at once—to deepen students' engagement with and understanding of specific subject disciplines, to establish powerful connections across subjects, to resolve persistent inequities, and to grant more serious attention to students' preparation for adult work. Three preliminary observations emerge here.

First, schools attempting the most ambitious forms of academic-vocational integration may also be schools aggressively pursuing other reform agendas. The result is a proliferation of reform agendas and external obligations, of which the integration of academic and vocational education is just one. Because such schools have been quite entrepreneurial in their fund-raising, and quite eclectic in their embrace of new ideas, it is not always easy to locate a singular case of particular models. Nor is it always easy to trace a single over-arching conception of the high school to which the various reform activities are expected to contribute. For example, Southgate was a member of the Coalition of Essential Schools, a participant in the California Partnership Academies, a recipient of a sizable state "restructuring" grant and a smaller foundation grant, and a site for a national study of youth apprenticeship. Prairie was also a successful applicant for state restructuring funds, a participant in the Partnership Academies, and a recipient of private foundation funds. Both schools also boasted teachers who were active in the subject-matter reforms being promoted by the national subject matter associations and state-level subject matter projects. Under these circumstances, given separate proposals, budgets, activities, and deadlines, each venture begins to seem less like a contributor to an overall reform campaign than a conceptually distinct, organizationally separate, and time-limited project. Teachers rarely encounter these reforms—whether singly or in combination—as closely-woven whole cloth; rather, they follow individual threads whose origins often seem distant and tangled. What may look like a coherent reform

strategy or vision at the level of the state, foundation, or even district, has a far more discontinuous appearance to individual teachers.

Second, multiple reforms compete for the time and attention of schools, groups, and individuals. From the standpoint of academic teachers, the most "visible" of these reforms are those that bear immediately on the ways they think about and approach subject matter teaching, and the ways in which they resolve problems of equity in an increasingly diverse student population. The various projects offer quite different answers to questions about work preparation, academic education, and equity; overall, in the case study schools, vocational pursuits remained a different—and for many, a lesser—option for students and for teachers. With the exception of individuals who become directly involved in career academies or similar structures, few academic teachers have had occasion to think explicitly and imaginatively about what "learning work," as Simon, Dippo, and Schenke (1991) phrase it, might amount to in a restructured school, or how vocational education might contribute to other reform goals. Structures that join teachers' work in unfamiliar ways, such as the career academies, have enabled teachers in these schools to discover shared interests, penetrate old stereotypes, and forge new social ties. They have also revealed the limitations of structural solutions to problems that center on multiple and competing views of schooling; judging by the real, but limited gains in these schools, the kinds of changes sought by the vocational reform movements require both the bridge (the new structures), an incentive to cross it, and a reason to stay in new territory. The success and visibility of the new models might engender wider discussion and debate within schools about the appropriate way to prepare students for work. We might do more to foster and make public the nature of that discussion and debate.

Third, the most ambitious integration models, such as career academies, have generally succeeded in garnering the respect of academic teachers, parents, and students—although not necessarily because they have fostered a deeper and broader understanding of what "learning work" might entail. Such models appear to achieve their effect with their students largely on the basis of (1) general "planfulness" about the future (including both postsecondary education and career); (2) small scale and close socio-emotional support for students of the sort also attempted by other "small school" or "school-within-a-school" models; and (3) the "press for achievement" communicated by teachers who monitor student progress closely. On this basis alone, these seem ventures worth supporting. It is perhaps through these accomplishments that these and similar

programs most clearly stand to influence the wider school program and the experience of a larger number of students; that is, it would not require a major philosophic shift, and would require only a quite manageable structural reconfiguration, for most schools to supply the conditions available to students in these academies.

This inquiry began with the observation that present vocational reform initiatives challenge well-established traditions of high school teaching and learning, but that they also coincide with other campaigns to alter the face of secondary education. As Tyack and Tobin (1994) anticipated by pointing to the fundamental and unchanging "grammar" of schooling, traditions die hard. Nonetheless, the landscape in our case study schools has transformed in some ways. Certainly the gains achieved by the career academies in both schools have served to elevate the status of vocational programs. Schools have begun to advocate methods of instruction and assessment that have long been associated with the best of vocational preparation, methods that emphasize active student learning and afford students multiple ways of demonstrating their understanding and competence. In these two schools, at least, teachers and others are more likely now than before to be engaged in discussions and debates that center on fundamental purposes of schooling. As yet, these discussions and debates rarely accord serious attention to the vocational goals of schooling. On a large and more ambitious scale, to fundamentally transform the school's role in helping adolescents understand and prepare for work is likely to require more concerted attention to that goal than the academies alone have the power to compel.

Substantial change in the character of vocational preparation seems unlikely unless schools succeed in placing "work" more visibly on the agenda of schoolwide goal-setting and redesign. Schools engaged in comprehensive programs of restructuring seem well-positioned to do so. They typically have created governance and decision-making structures that include multiple stakeholders: administrators, teachers, parents, community members, and students. Many have created common planning times for teachers to work both within and across traditional subject boundaries. Some, like these case study schools, have sought new ways of organizing teachers and students that will foster greater coherence across the curriculum and enable teachers and students to know and support one another better. Professional development activities tend to focus on ways of "rethinking" approaches to curriculum, instruction, and assessment. New forms of assessment offer opportunities to explore the intersection of academic concepts and

practical application (e.g., senior projects typically incorporate a written narrative, a "product," and an oral presentation).

Restructuring schools supply conditions that are—in principle—conducive to a serious examination of "learning work." For example, schools might take advantage of existing arrangements for schoolwide decision making and existing blocks of schoolwide professional development time to create opportunities to investigate what is and might be meant by "learning work." This would require that such occasions be centered less on "decision making" (in the case of governance committees) or "training" (in the case of professional development days) than on informed deliberation: study of alternative conceptions and emerging models, scrutiny of past stereotypes, discussion, and debate. It would also require that academic and vocational teachers spend time getting to know one another's work through observation, joint planning, and shared assessment of students' work. The possibilities for developing, supporting, and testing alternatives to present practice seem limited unless that practice, and its relation to student experience and outcomes, is better and more widely understood. Debates at the level of broad ideology will fail to move the school agenda, and will only harden the divisions among teachers.

The focus on student assessment in restructuring schools creates a particularly powerful vehicle for considering the meaning of work and work preparation. That is, it is in the assessment of what students know and are able to do that the relationship between school and work might be made evident. Admittedly, the rhetoric of "authentic assessment" outstrips the reality of school practice. Useful evidence of student experience and student outcomes, and their relationship to school and classroom practices, seems in short supply in these schools. To produce such evidence means not only developing and supporting some small-scale experiments, but testing them and making their experiences known (as we did in comparing the academy, house, and traditional configurations at Prairie). It means developing a mechanism—and a disposition—for the collective and consistent scrutiny of student work and other outcomes. It means discussing the meaning of "evidence" in relationship to teachers' and parents' priorities for curricular and extracurricular activities. What knowledge and skill are valued, and why? What constitutes good work by students? In what ways does "good work" in school resemble good work out of school? What happens to the school's graduates? Institutional support for teacher research, an altered role for district "research and evaluation" units, and

university-school partnerships all might enable schools to create meaningful tests of new possibilities.

Together, such developments might begin to establish both the impetus and the capacity to make something quite different of "learning work" in the comprehensive high school. The restructuring environment does not guarantee movement along these lines or assure a close fit among the various streams of reform activity, but it does present the opportunity to act.

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